
Whole Grains & Fiber

Grains

- Grains, also known as starches, include foods made from wheat, rice, oats, cornmeal, barley, or other cereal grains. They make up foods such as bread, pasta, rice, cereal, and tortillas. Whole grains are the best choice. It is recommended that at least half of the grains we eat should be whole grains. Most people in the United States don't eat enough whole grains.
- **Grains are made up of 3 parts:**
 - **The Bran** – The hard outer coating of a grain kernel, it has most of the kernel's fiber, it also contains vitamins and minerals.
 - **The Germ** – The nutrient-rich inner part, it has vitamins, healthy fats, and other natural plant nutrients such as phytochemicals.
 - **The Endosperm** – the soft, white, starchy inside portion of a grain kernel, it has small amounts of vitamins and protein and very little fiber.

Whole Grains:

- Whole grain means it is the “complete” grain, containing all 3 parts. These grains tend to have more texture and a shorter shelf-life. Examples are whole wheat, oatmeal, farro, quinoa, barley.

Refined Grains:

- Refined grains have been milled to have the germ and bran removed. They are usually white in color and known as “white” grains. Milling not only removes most of the fiber, but also removes up to 25% of the grain's protein and many essential nutrients. These grains have a finer texture and a longer shelf-life. Examples are white rice, most white breads, cakes, crackers, and cookies.

Enriched Grains:

- Most refined grains are “enriched,” which means after many nutrients have been removed during the milling process, certain vitamins (thiamin, riboflavin, niacin, folic acid) and iron are replaced. Fiber is not replaced in enriched grains.

Fortified Grains:

- When foods have nutrients added that aren't naturally found in the food or a large amount of a nutrient is added into the item for a "boost" to better meet its consumer's needs. For example, many breakfast cereals are fortified with folic acid and iron.

Why Eat Whole Grains?

- Whole grains provide fiber, vitamins, minerals, and other healthy nutrients to our diet.
- A focus on consuming whole grains with fiber is recommended to help you meet your daily fiber consumption. A diet with adequate fiber intake can help lower cholesterol, prevent diabetes, and heart disease. When foods that contain carbohydrates also contain fiber, it slows the absorption of sugar. Foods with fiber also make us feel full, which discourages overeating and can help us maintain a healthy weight. Fiber is also helpful to move food through the digestive system, promoting healthy bowel function and preventing against constipation. Good sources of fiber contain 10-19% of the Daily Value; excellent sources contain 20% or more of the Daily Value.

Nutrient Composition of Different Whole Grains

Grain	Serving	Calories	Fiber (grams)	Protein (grams)	Carbs (grams)
Whole Grain Pasta	2 oz Dry	200	5-7	8	39
Barley	1/4 Cup Dry	170-200	5-7	5	37-44
Bulgur	1/4 Cup Dry	150	5	5	33
Cornmeal	1/4 Cup Dry	140	5	3	30
Farro	1/4 Cup Dry	160	3-5	6	33
Quinoa	1/4 Cup Dry	170	3-5	6	29
Oats (Old Fashioned)	1/2 Cup	150	4	5	28

Popcorn	3 Cups Popped	100	3	3	16
100% Whole Wheat Bread	2 Slices	150	3	6	27
Brown Rice	1/4 Cup Dry	170	2	3	34

- Keep in mind that whole grains vary in dietary fiber content. Just because it is a whole grain does not make it high in fiber. The term fiber refers to carbohydrates that cannot be digested. Fiber is found in fruits, vegetables, grains, and legumes.

Tips for Choosing Healthy Grains and Reading Food Labels:

- Ingredients on a food label are listed from the greatest to the least amount.
- When choosing a whole grain food, look for the word “whole” in the ingredient list such as “whole wheat”. Whole grains may also be listed as followings: brown rice, quinoa, farro, buckwheat, popcorn, oatmeal, whole rye, bulgur (Cracked wheat) and sorghum.
- If there is more than one whole grain, the grains should be near the start of the list.
- If you buy foods with refined grains, look for the words “enriched” or “fortified” on the ingredients list.
- You should limit your intake of refined grains, especially those that have not been enriched or fortified.